Garbage Management Plan

in accordance with revised MARPOL 73/78, Annex V
IMO Res. MEPC.201(62)

m/v “model”
IMO No.

This Garbage Management Plan has been developed for the above ship and is valid until further revision.

<table>
<thead>
<tr>
<th>Place</th>
<th>Date</th>
<th>Name</th>
<th>Master</th>
<th>Signature</th>
</tr>
</thead>
</table>

m/v “Model” GMP-02 / 2013
Vessel’s Particulars

Name of the Vessel
Call Sign
IMO Number
Official Number
Port of Registry
Flag
Owner
Manager/Operator
Charterer
Year Built
Shipyard
Displacement tdw
Length of the Ship
Main Engine(s) kW
Number Crew/Passengers
Trade/Purpose
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1 Introduction


1.2 In 2011, IMO adopted by Resolution MEPC.201(62) amendments to MARPOL Annex V which require that:

- every ship of 100 gross tonnage and above, and every ship certified to carry 15 or more persons, and fixed or floating platforms shall carry a Garbage Management Plan;
- every ship of 400 gross tonnage and above, and every ship certified to carry 15 or more persons engaged in voyages to ports or offshore terminals of another Party, and every fixed or floating platform shall be provided with a Garbage Record Book; and
- every ship of 12 metres or more in length overall, and fixed or floating platforms shall display Placards which notify the crew and passengers of the ship's disposal requirements of regulations 3, 4, 5 and 6 of the Annex as applicable.

These provisions are included in regulation 10 to the revised MARPOL Annex V with an entry into force date of 1 January 2013.

1.2 This plan has been developed to cover all requirements of Annex V considering that Administrations have further enhanced Port State Control inspections.

1.3 Preparing this plan, the IMO guidelines published in resolution MEPC.201(62) have been taken into account. Hence the mandatory requirements for the preparation of a shipboard garbage management plan have been fulfilled.

1.4 According to the requirements of the Annex V, the Garbage Management Plan shall be written in the working language of the crew, and, for ships engaged in international voyages, in English.

1.5 The garbage management plan has to contain a list of the particular ship’s equipment and arrangements for the handling of garbage as well as extracts from and/or references to existing company instructions. If any is available a manual of the equipment shall be attached hereto (appendix 3 to this plan).

1.6 This plan is part of the Safety Management System of our company and the ships operated by us.

1.7 The Garbage Management Plan does not need to be approved by the administration.
2 Legal Requirements

2.1 Extract from the revised Annex V of MARPOL 73/78:

Regulation 10
Placards, Garbage Management Plans and Garbage Record Keeping

(1) Placards
a) Every ship of 12 metres or more in length overall and fixed or floating platforms shall display placards which notify the crew and passengers of the disposal requirements of regulations 3, 4, 5 and 6 of this Annex, as applicable.
b) The placards shall be written in the official language of the State whose flag the ship is entitled to fly, and for ships engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, in English or French.

(2) Garbage Management Plan
Every ship of 100 tons gross tonnage and above and every ship which is certified to carry 15 persons or more and fixed or floating platforms shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for minimizing, collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person in charge of carrying out the plan. Such a plan shall be in accordance with the guidelines developed by the Organisation and written in the working language of the crew and for ships, engaged in international voyages, in English.

(3) Garbage Record Book
Every ship of 400 tons gross tonnage and above and every ship which is certified to carry 15 persons or more engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the convention and every fixed and floating platform shall be provided with a Garbage Record Book. The Garbage Record Book, whether as a part of the official logbook or otherwise, shall be in the form specified in the Appendix to this Annex.
a) Each discharge operation or to a reception facility, or completed incineration, shall be promptly recorded in the garbage record book and signed for on the date of the incineration or discharge by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the master of the ship. The entries in the Garbage Record Book shall be at least in English, French or Spanish. The entries in an official national language of the flag the ship is entitled to fly shall prevail in case of a dispute or discrepancy;
b) The entry for each incineration or discharge shall include date and time, position of the ship, category of the garbage and the estimated amount incinerated or discharged;
c) The Garbage Record Book shall be kept on board the ship or the fixed or floating platform, and in such a place as to be available for inspection in a reasonable time. This document shall be preserved for a period of two years after the last entry is made in the record;
d) In the event of any discharge or accidental loss referred to in regulation 7 of this Annex any entry shall be made in the Garbage Record Book, or in the case of any ship of less than 400 gross tonnage, an entry shall be made in the ship's official log-book, of the location, circumstances of, and the reasons for the discharge or loss, details of the items discharged or lost, and the reasonable precautions taken to prevent or minimize such discharge or accidental loss.
(4) The Administration may waive the requirements for Garbage Record Books for:
- any ship engaged on voyages of (one) 1 hour or less in duration which is certified to carry 15 persons or more; or
- fixed or floating platforms.

(5) The competent authority of the Government of a Party to the Convention may inspect the Garbage Record Book or ship’s official log–book on board any ship to which this regulation applies while the ship is in its port or offshore terminals and may make a copy of any entry in those books, and may require the master of the ship to certify that the copy is a true copy of such an entry. Any copy so made, which has been certified by the master of the ship as a true copy of an entry in the ship’s Garbage Record Book or ship’s official log-book, shall be admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of the Garbage Record Book or ship’s official log-book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

(6) The accidental loss or discharge of fishing gear as provided for in revised MARPOL, Annex V, regulations 7.1.3 and 7.1.4 which poses a significant threat to the marine environment or navigation shall be reported to the State whose flag the ship is entitled to fly, and, where the loss or discharge occurs within waters subject to the jurisdiction of a coastal State, also to that coastal State.

2.2 Further regulatory requirements

Preparing and using this plan the following should be taken into consideration:

- Revised MARPOL Annex V
  MEPC.201(62) adopted 15th July 2011

- IMO Guidelines on the implementation of Annex V of MARPOL 73/78
  MEPC.219(63) adopted 2nd March 2012

- IMO Guidelines for the development of Garbage Management Plans
  MEPC.220(63) adopted 2nd March 2012

- Other available technical guidance on shipboard garbage handling such as ISO 21070 “Standard for the management and handling of shipboard garbage”
3 Prevention of Pollution from Garbage

3.1 Minimizing of garbage

To achieve cost-effective and environmentally sound results, we use a combination of three complementary techniques to manage garbage:

a) Source reduction at the place of origin

We are endeavoured to receive as little as possible packaging on board of our ships. Wrapping which protect goods on its way to the ship should be replaced in the port before receiving the goods. The storage and handling of goods on board should be organised without the need of packing material. The crew and the passengers should be instructed to come on board with a minimum of packaging.

Also in the day-to-day business of the vessel, a minimum of packaging should be moved within the ship. Wrapping material should be e.g. removed in the provisions room and the transport to the galley should be organised in two-way-boxes. By doing so, the amount of garbage arising in the galley can be reduced.

b) Recycling

Where packaging is imperative, two-way-packaging or recyclable material should be used preferably. Recyclable waste and packaging should be collected on board and disposed to special companies guaranteeing a proper recycling.

c) Disposal

Discharge into the sea in those limited situations where it is permitted.

Generally disposal of all garbage into the sea is prohibited, except as provided otherwise in regulations 4, 5, 6 and 7 of revised MARPOL Annex 5.

The proper disposal in the ports has the priority over discharge at sea.

When requisitioning stores and provisions, we encourage our suppliers to remove, reduce all packaging, at an early stage, to limit the generation of garbage on board ships.

The ship’s garbage is made up of distinct components, some of which are regulated in MARPOL Annex V, while others may be regulated locally, nationally or regionally, e.g. domestic, operational, cargo-associated, food and maintenance waste. Each component of the garbage should be evaluated separately to determine the best management practice for that type of garbage, and to be grouped into categories specified in the Garbage Record Book.

3.2 Garbage Record Book and Garbage Record-Keeping

The ship’s officers document each disposal of garbage in the Garbage Record Book. The Garbage Record Book exists as ready-made booklet. Appendix 1 to this plan shows a sample of the form “Garbage Disposal Record” which you will find in the Garbage Record Book. The entries into the Garbage Record Book have to be made in English, French or Spanish.

Receipts

The master obtains from the operator of port reception facilities, or from the master of the ship receiving the garbage, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates must be kept on board the ship with the Garbage Record Book for two years.
Amount of garbage

The amount of garbage onboard is estimated in m\(^3\), if possible separately according to category. The Garbage Record Book contains many references to estimated amounts of garbage. It is recognised that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimated will differ before and after processing (e.g. shredding, compacting, incinerating, etc.). Some processing procedures may not allow for usable estimate of volume, e.g., the continuous processing of food waste. Such factors are taken into consideration when making and interpreting entries in a record.

3.3 Placards and information

MARPOL 73/78 Annex V, Regulation 10, paragraph 1 demands the display of placards for informing crew and passengers about the garbage handling. The placards have to be written in the official language of the State whose flag the ship is entitled to fly, and in English, French or Spanish.

In the passenger area placards are being displayed at several places which forbid throwing overboard of garbage and cigarettes. In all passenger cabins extensive information are available about the garbage matter, separation and disposal. With this the passers are required to follow the regulations of garbage management. At the beginning of the voyage the ship's command instructs the passengers by the public address system to refrain from throwing anything overboard, in particular garbage and cigarettes and to use the receptacles provided.

In the crew's area further placards are being displayed, in particular about collection, separation, transportation, processing and disposing of garbage. They contain clear instructions for the particular case. Appendix 6 to this plan can be used as placard.
4 Contents of the Garbage Management Plan

4.1 Designated Person for the execution of the plan

In accordance with the regulation 10.2 of the revised MARPOL Annex V, this person is designated in the garbage management plan to be responsible for implementing the procedure within the plan. The master appoints the designated person at the commencement of the voyage and displays his/her name by a notice.

The duties of the designated person include but are not limited to:

- ensuring placards are displayed in accordance with the Regulation specified in Chapter 3.5,
- ensuring the crew complies with the ship’s waste management strategy,
- ensuring incineration of wastes in accordance with the equipment manufacturer’s instructions
- ensuring the proper condition and functioning of all equipment for reception, collection, processing, incineration and disposal (maintenance)
- liaison with shore authorities for the port reception facilities
- signing the Garbage Record Book as required by regulations,
- monitoring the arising amount and composition of garbage, recognising development on time and initialising appropriate measures,
- verifying the effectiveness of procedures of this garbage management plans and introducing improvement in accordance with the master, as necessary.

The designated person will be assisted by personnel of all departments in order to ensure an extensive support in collecting, separating, processing and disposal of garbage in all departments of the vessel and to ensure that all procedures are being carried out according to the garbage management plan.

4.2 Garbage treatment on board

Phase of the garbage treatment on board:

| picking-up | transport | collection, separation | transport | processing | transport | storage | disposal |

4.2.1 Collection of garbage

Suitable receptacles for collection and separation

Where the garbage arises we provide for suitable receptacles. As the space allows it we put up separated receptacles as per the separation scheme. The locations of the receptacles should be obtainable and to the convenience of the people on board.

Any garbage may be put in the receptacles of the appropriate category only. All persons on board - regardless the crew or passenger - have to comply with this principle. The crew advises the passengers or guests in case of misuse or any violation of MARPOL Annex V (e.g. throwing overboard of garbage).

The type and size of the receptacles correspond with the need of the respective category of garbage.

Receptacles for ash, cigarettes, matches or other hot material, have to be fire-proof.
Receptacles for wet waste or humidity submitting substances have to be water-proof. These are for example cans, one-way cups, food packaging, food waste etc.)

Receptacles for wet waste have to be washable.

All receptacles and containers have to be marked with their determination, i.e. the description of the garbage category or the type of the appropriate waste. Warnings have to be shown for specific dangers of particular types of garbage (e.g. poisonous material or material dangerous to health). Furthermore, warnings have to be shown for all material which must not be put into that container (e.g. contents of ash trays).

**Locations of receptacles, collection and separation stations**

Locations and stations of all receptacles for collection and separation are identified as specified in Appendix 2.

4.2.2 **Transport from the source of generation to the collection and separation stations**

**Garbage in the passenger area (passenger cabins)**

In each passenger cabin a rubbish bin for all categories of garbage has to be located. Furthermore a bin for sanitary towels in the bathroom/toilet.

The cleaning personnel empties these receptacles into separate transportable containers once a day. The garbage has to be brought to the central garbage collection and separation place.

**Garbage in the crew area (crew cabins)**

The cabins of the ship’s command are being served by stewards as described under 4.2.3.1. All other crew cabins are being served by the respective crew. They bring their garbage to the central collection and separation stations in the receptacles located in their cabins.

**Garbage in the accommodation area**

Garbage arising in the accommodation area of the crew and in public passenger areas is being collected in receptacles served by the stewards.

Can and bottle waste are generated in galley, dining room, saloon and private rooms and collected separately by each responsible person and individuals.

**Garbage in pantries and galleys**

Very different types of garbage are being generated here. They are divided into the following categories which are the basis for separation:

- paper, cardboard, cartons, etc.
- synthetic material, foils synthetic material bags, shrinking foils etc.
- metal cans, lids and bottle capsules, etc.
- bottles, glasses and glass products generally
- raw food waste
- food scraps, food particles, and all other materials contaminated by such wastes

All waste is taken to the collecting places at least once a day.

**Cargo-associated waste**

These are all materials which have become wastes as a result of use on board a ship for cargo stowage and handling. The cargo associated wastes include, but are not limited to dunnage, shoring, pallets, lining and packing materials, plywood, paper, cardboard, separation nets, jute cloths, wire and steel strapping. The waste is collected and separated by responsible person for the deck area.
**Garbage Management Plan**

**Water-pollutant wastes**
Garbage contaminated by water-pollutants must not be discharged to the sea but have to disposed in a port as special garbage. Garbage like this has to be stored on board separately and has to be marked and labelled with information about the type of contamination.

Other kind of wastes are e.g. rugs/twist, paint residues, thinner, residues of other chemicals, cleaning agents, waste oils etc. as well as bins and rags contaminated with these substances. Furthermore, soot, machinery residues, scrapped paint, deck sweepings, wiping wastes and rags, toner cartridges from photostat copiers or laser printers, ink cartridges of computer printers (poisonous!) etc. arise. Also, the residues and waste of freelancers on board, particularly hairdresser and photographer, belong to the ship’s garbage. Under no circumstance, all these wastes must not be discharged at sea but have to be disposed as special waste to professional waste reception facilities ashore.

**Incineration ashes**
These are to be collected and separated by the engine crew.

**Food waste**
Some Governments have regulations for controlling human, plant and animal diseases that may be carried by foreign food wastes and materials that have been associated with them. These regulations may require incinerating, sterilising or other special treatment of garbage to destroy possible pest and disease organisms.

Such garbage is kept separate from other garbage and preferably retained for disposal in port in accordance with the laws of the receiving country.

Precautions must be taken to ensure that plastics associated with food wastes (e.g. plastic food wrappers) are not discharged at sea with the food wastes.

**Lines and nets**
Synthetic fishing net and line scraps generated by the repair or operation of fishing gear shall collected in a manner that prevents loss overboard. Such material may be incinerated, compacted or stored along with other plastic wastes.

**Recyclable waste**
It is recommended that the crew should deposit recyclables such as glass, metal, plastic, paper wastes, etc., into receptacles provided.

4.2.3 Handling of garbage from collecting and separation places to the possible processing places and plants

Suitable identified receptacles are provided on primary collection and separation stations. The wastes are separated automatically when they are properly put into appropriate receptacles. The Designated Person verifies this and ensures the separation in accordance with the instructions given.

From here the garbage can be
- processed on board (see 4.3)
- stored on board (see 4.4)
- discharged into the sea in those limited situations where it is permitted (see 4.5)

All these tasks have to be performed by qualified personnel upon explicit instruction of the Designated Person, only.
4.3 Processing of garbage

4.3.1 Personnel responsible for the operation of the equipment

The functions and names of the persons in charge have been laid down in appendix 4.

At crew change, these details have to be changed and the appendix 4 has to be amended respectively. It is being authorized by signature of the master and has to be displayed in at least one place on board well visibly.

Other then the persons mentioned in appendix 4 are not entitled to operate the equipment!

4.3.2 Garbage processing equipment

The garbage processing equipment, plants and units available on board are listed in appendix 3. The respective capacity is being mentioned there. Furthermore, the Designated Person is able to calculate the right time of garbage disposal, recognizing the arising amount of garbage and the storage capacities.

No other equipment as listed in Appendix 3 must be used for processing of garbage!

Locations of the processing devices and equipment

The details are listed in appendix 3.

These devices have to be located as far away as possible from provisions rooms, stores, galleys and pantries. The floor of this room should be prepared for easy cleaning with water.

Categories of garbage processed by the equipment available

The details are listed in appendix 3.

4.3.3 Handling of garbage between the primary processing stations and the storing and disposal facilities

Between the locations described in 4.3.3 and the storage and disposal locations the garbage has to be transported in appropriate and suitable containers only. Doing so, it has to be observed that no parts of the garbage or substances leak or are lost in any other way. This should avoid dirtying of the ship or pollution of the sea.

In particular, it has to be observed that no health risk arises by leaking vapours (e.g. solvents) or from bacteria (e.g. from rotting food, sanitary towels, waste from hospital, etc.).

Transportation containers have to be stowed and secured well in case of using them for storage purposes.

4.3.4 Procedures for the processing of garbage

The respective person in charge (see appendix 4) prepares the garbage processing equipment according to the operation instruction, gets the appropriate collecting containers ready, switches the unit on and feeds it. Doing so, he pays special attention in observing all safety at work instructions to avoiding injuries. In particular while doing maintenance and cleaning work of the equipment, the unit has to be switched off.

Only admitted substances may be processed in a particular garbage processing unit. Before the unit is operated with garbage of another category, all residues of the garbage processed before have to be removed to avoid intermixing.

All garbage to be disposed at sea, in those limited situations where it is permitted, is stored in separate marked containers. It can be ground and/or compacted to reduce the storage volume.
Garbage Management Plan

a) Comminuting/grinding

The volume of the garbage can be reduced by comminuting or grinding.

Comminuted or ground garbage must be able to pass through a screen with mesh size no greater than 25mm for disposal into the sea. Such comminuted or ground garbage is stored in suitable receptacles for subsequent discharge into the sea. This requirement generally applies to food wastes and the comminutor or disposer is installed in the galley area. Such comminuted or ground garbage shall not be discharged into a ship’s sewage treatment system unless it is approved for treating such garbage. It is recommended that the discharge from shipboard comminutor be directed into a garbage holding tank when the vessel is operating within an area where discharge is prohibited.

Residues of shell and crustaceans (mussels, crabs, lobsters etc.) shouldn’t be ground since the mineral substances let the cutters of the comminutor get dull.

b) Compacting/compressing:

Also compacting/compressing is able to reduce the volume of the garbage. If grinding machines are used prior to compaction, the compaction ratio can be increased and the storage space decreased.

Prior to compaction, it has to be checked whether humidity of the garbage can leak out. In this case, the compactor has to be designed for wet garbage and the leakage has to be collected in suitable containers.

c) Composting

Composting is a further method of reducing the volume of garbage and for generating a valuable biological fertiliser. During the composting, raw and uncooked food waste are being converted to fertiliser and soil by micro-organism. These will be added by means of a composting-agent.

Substances from animals like meet, fish, eggs etc. must not be composted. Furthermore, no cooked or mouldy foodstuff. Composting needs a lot of oxygen. Garbage to be composted should not be compacted but should be fed as loose as possible into the composter. The temperature around should be at least 20°C. The room should be fitted with a suitable ventilation which exhausts to outside. An always low air pressure in that room should ensure that no air can flow into the superstructure, because it contains bacteria. These could lead to pneumonia over a longer period of time.

The generated compost has to be retained on board in suitable containers until its dispose to shore based processing.

d) Incineration of garbage

Special rules on incineration under domestic law may apply in some ports and may exist in some special areas.

Incineration of hazardous materials (e.g. scraped paint, impregnated wood) and certain types of plastics (e.g. PVC-based plastics or other plastics containing hazardous chemicals) calls for special precaution due to the potential environmental and health effects from combustion of by-products.

Garbage is incinerated by a type-approved incinerator on board the ship.

Any incineration of garbage by using only a simple frame incinerator installed on deck is strictly prohibited.

Operating an incinerator the following should be noted:

- Before starting the incineration in a port or in the territorial waters it must be checked, whether the operation is allowed or under which special rules by the authorities. The
person in charge for incineration has to ask the ship’s officers for permission before commencing the incineration.

- Incineration of plastic waste can generate high temperatures. The temperature has to be observed continuously. Too high temperatures can generate poisonous and environment polluting nitric oxides. Too low temperature can lead to sooting. The combustion of plastics requires huge amount of oxygen.

- The incineration of dangerous goods and substances, e.g. scrapped paint, painted or impregnated wood, etc. is prohibited.

- All instruction given by the manufacturer of the incinerator as well as the classification society has to be observed and followed.

4.3.5 Available operating and maintenance procedures

Operating and maintenance procedures for all processing equipment are available on board and are part of this garbage management plan. Due to the limited space they have been extracted. Appendix 3 to this plan lists all valid documents and states its storage places on board.

4.4 Shipboard storage of garbage or reusable or recyclable material

Appendix 5 to this garbage management plan lists the following items:

Location, intended use and capacity of the available storage stations for each category of garbage or reusable or recyclable material.

Conditions of how the garbage will be stored, e.g.

"food – frozen"
"cans – compacted and stacked"
"paper – compacted and should remain dry"

Handling of garbage, including reusable and recyclable material, between the primary storage locations and the disposal

The persons in charge of the handling of garbage are specified in appendix 4 to this plan.

If garbage can be discharged directly to the sea from its storage facility (e.g. emptying of a garbage tank through a port hole), the port hole or its handle must be locked in restricted areas. The same applies even for permitted areas on special instruction of the shipping company.

If there is a danger of a spontaneous combustion (e.g. oily rags etc.), these have to be stored in fire-proof special containers and be checked regularly.

Garbage to be disposed to shorebased reception facilities will be stored in separate clearly marked containers. As such garbage is expected to be stored for a long time on board, efforts are made to reduce weight and volume of the garbage. Attention is paid to prevention of fire accident.

Garbage to be discharged into the sea, in those limited situations where it is permitted, will be stored in separate clearly marked containers. This garbage is expected to be stored on board for a short period only. Attention is paid to prevention of fire accident.
### Disposal of garbage

Garbage disposal by garbage type in accordance with revised Annex V of MARPOL 73/78:

<table>
<thead>
<tr>
<th>Garbage Type¹</th>
<th>All Ships except Platforms²</th>
<th>Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food waste comminuted or ground³</td>
<td>≥ 3 nm, en route and as far as practicable</td>
<td>Discharge permitted</td>
</tr>
<tr>
<td>Food waste not comminuted or ground</td>
<td>≥ 12 nm, en route and as far as practicable⁴</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues⁵, not contained in washwater</td>
<td>≥ 12 nm, en route and as far as practicable</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues⁵, contained in washwater</td>
<td>≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2)</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives⁶ contained in cargo hold washwater</td>
<td>Discharge permitted</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives⁶ in deck and external surfaces washwater</td>
<td>Discharge permitted</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Animal Carcasses (should be split or otherwise treated to ensure the carcasses will sink immediately)</td>
<td>Must be en route and as far from the nearest land as possible. Should be &gt; 100 nm and maximum water depth</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse</td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
</tbody>
</table>

¹ When garbage is mixed with or contaminated by other harmful substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

² Offshore platforms located 12 nm from nearest land and associated ships include all fixed or floating platforms engaged in exploration or exploitation or associated processing of seabed mineral resources, and all ships alongside or within 500 m of such platforms.

³ Comminuted or ground food wastes must be able to pass through a screen with mesh no larger than 25 mm.

⁴ The discharge of introduced avian products in the Antarctic area is not permitted unless incinerated, autoclaved or otherwise treated to be made sterile.

⁵ Cargo residues means only those cargo residues that cannot be recovered using commonly available methods for unloading.

⁶ These substances must not be harmful to the marine environment.
4.5.1 Disposal of garbage ashore
The garbage disposal ashore should be preferred. The designated person co-ordinates disposal with port authorities and reception facilities. All Parties to the MARPOL Convention have obliged themselves to provide sufficient and professional reception facilities. The shore based organisation of the shipping company should be informed in case disposal is impossible or there are doubts about the technical and environmental orientated disposal (form provided in the Garbage Record Book, see a sample form in appendix 1 to this plan). The company addresses a letter of protest to the respective flag state of the ship.

4.5.2 Discharge into the sea
Each discharge into the sea will be planned and arranged, exclusively, by the designated person. Any discharge must be approved by the master, case by case.

Before commencing discharging it has to be checked and ensured that

- this substance is allowed to be discharged according to revised MARPOL, Annex V
- the ship outside is of restricted areas according to revised MARPOL, Annex V
- the ocean current doesn’t wash the garbage ashore
- no fishing vessels are in the vicinity.

Having completed discharging, the cleanliness of each container/tank should be verified. In case of faulting - particularly by food waste and domestic waste - the containers/tanks should be washed and cleaned.

4.5.3 Documentation
Every disposal, discharge or incineration has to be documented in the Garbage Record Book. From third Parties a confirmation of receipt has to be obtained. See chapter 3.4.2 of this plan.

4.5.4 Further definitions

Cargo residues
Cargo residues means the remnants of any cargo which are not covered by other Annexes to the present MARPOL Convention and which remain on the deck or in holds following loading or unloading, including loading and unloading excess or spillage, whether in wet or dry condition or entrained in wash water but does not include cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship.

Cargo material contained in the cargo hold bilge water should not be treated as cargo residues if the cargo material is not harmful to the marine environment and the bilge water is discharged from a loaded hold through the ship” s fixed piping bilge drainage system.

Cleaning agents and additives
Cleaning agents and additives contained in hold wash water, and deck and external surface wash water are considered „operational wastes” and are classed as garbage under MARPOL Annex V.

Cleaning agents or additives may be discharged into the sea so long as they are not considered harmful to the marine environment, provided the cleaning agents or additives –

- are not a „harmful substance” in accordance with the criteria in MARPOL Annex III; and
- do not contain any components which are known to be carcinogenic, mutagenic or reprotoxic.

In order to demonstrate that the cleaning agent or additive is not harmful to the environment, records must be available on the vessel containing evidence by the producer that the product meets the criteria for not being harmful to the marine environment. This could be in the form of a safety data sheet or a stand-alone document.
5 Education and training

5.1 Facilitate collection of garbage

When signing on for the first time on one of our vessels, all crew members receive an introduction for collecting and separating garbage. The treatment of garbage and keeping the oceans and waters clean is an integral part of our familiarisation programme.

Commencing the voyage, ship’s officers give a brief introduction to the voyage schedule at which all crew members as well as all other employees on board have to take part. Repeatedly, the proper garbage treatment is being pointed out.

In addition to that, this Garbage Management Plan is being made available to everybody at any time for information.

5.2 Facilitate the processing of garbage

All persons who serve garbage processing devices must have sufficient knowledge of the respective plant.

The Designated Person carries out trainings on board. The training programme contains particularly

- the requirements of MARPOL, Annex V
- the subdivision of garbage into categories
- the restrictions and ban of discharging garbage into the sea
- the instructions of this garbage management plan
- instructions or manuals for the processing equipment
- instructions for the inspection and maintenance of the appliances
- waste disposal requirements of the states and ports called.

5.3 Facilitate the storage of garbage

The designated person in charge of the plan carries out periodical training and education for facilitating the storing of garbage on board. All training programmes treat the difficulties at the execution of this plan. The programmes emphasise problems in implementing this plan and the program outcome is reported to the head office for reference to development of training and education programmes.
## Record of Garbage Disposal

### Garbage Categories

A. Plastics  
B. Food wastes  
C. Domestic wastes (e.g. paper products, rags, glass, metal, bottles, crockery, etc.)  
D. Cooking oil  
E. Incinerator ashes  
F. Operational wastes  
G. Cargo residues  
H. Animal carcass(es)  
I. Fishing gear

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>Position of the Ship/ Remarks (e.g., accidental loss)</th>
<th>Category</th>
<th>Estimated Amount Discharged into Sea or incinerated (m³)</th>
<th>to Sea</th>
<th>to Reception Facility</th>
<th>Incineration</th>
<th>Certification / Signature</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Signature of the Master: 

Date:

Form GMP-011a 2013
1  **Place of the inadequacy:**
   - **Country:**
   - **Name of port or area:**
   - **Location in the port, berth, terminal, jetty:**
   - **Date of incident:**

2  **Type and amount of garbage for discharge to facility:**
   a. **Total amount:**
      - **Food waste:**
      - **Cargo-associated waste:**
      - **Maintenance waste:**
      - **Other:**
   b. **Amount not accepted by the facility:**
      - **Food waste:**
      - **Cargo-associated waste:**
      - **Maintenance waste:**
      - **Other:**

3  **Special problems encountered, please mark as appropriate:**
   - **Undue delay:**
   - **Inconvenient location of facilities:**
   - **Unreasonable charges for use of facilities:**
   - **Use of facility not technically possible:**
   - **Special national regulations:**

4  **Remarks:**

5  **Ship’s particulars:**
   - **Name of ship:**
   - **Owner or operator:**
   - **Distinctive number or letters:**
   - **Port of registry:**
   - **Number of persons on board:**

---

**Date of completion of form**

**Signature of master**

Form GMP-011b
Locations of receptacles and collection and separation places

The following receptacles are located on board:

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of Receptacle</th>
<th>Location</th>
</tr>
</thead>
</table>
| A        | Plastics including synthetic ropes and fishing nets, plastic garbage bags, incinerator ashes from plastic products | Collection place:  
Separation place: |
| B        | Food wastes                                                                        | Collection place:  
Separation place: |
| C        | Domestic wastes                                                                    | Collection place:  
Separation place: |
| D        | Cooking oil                                                                        | Collection place:  
Separation place: |
| E        | Incinerator ashes                                                                  | Collection place:  
Separation place: |
| F        | Operational wastes                                                                 | Collection place:  
Separation place: |
| G        | Cargo residues                                                                     | Collection place:  
Separation place: |
| H        | Animal carcass(es)                                                                 | Collection place:  
Separation place: |
| I        | Fishing gear                                                                       | Collection place:  
Separation place: |

Date:    Signature of the Designated Person:
## Garbage Processing Equipment and Devices

The following equipment and devices are on board:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manufacturer</th>
<th>Type</th>
<th>Location</th>
<th>Capacity</th>
<th>Garbage Categories</th>
<th>Operating Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incinerator</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Food waste disposer</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comminuter/shredder</strong></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Compactor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Komposter</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remark:**
Under the item "operating instructions" the exact storage place of these documents on board shall be laid down.

Date: ____________________  Signature of the Designated Person: ____________________
Appointment of the designated person and the responsible personnel for the operation of the processing devices

I hereby appoint the following persons until further notice:

**Designated Person in charge of Garbage Management on Board**
- Function:
- Name:

**Person responsible for Operating the Incinerator**
- Function:
- Name:

**Person responsible for Operating the Food Waste Disposer/Comminutor**
- Function:
- Name:

**Person responsible for Operating the Compactor**
- Function:
- Name:

**Person responsible for Operating other Garbage Processing Equipment**
- Function:
- Name:

m/v “MODEL.....................”
Voyage no. ..............................
Date: .................................

This appointment becomes effective as from: .................................

........................................
Master (name and signature)
List of Storage Devices and Appliances for the Storage until Disposal ashore or Discharge into the Sea

1. **Storage location for garbage of the category A like plastic**
   - **Location:**
   - **Purpose:** Storage until disposal to reception facilities or until incineration.
   - **Capacity:**

2. **Storage location for garbage of the category B like food waste**
   - **Location:**
   - **Purpose:** Temporary storage until discharge into the sea.
   - **Capacity:**

3. **Storage location for garbage of the category C like paper products, rags, glass, metal, bottles, crockery etc.**
   - **Location:**
   - **Purpose:** Storage until disposal to reception facilities or until incineration.
   - **Capacity:**

4. **Storage location for garbage of the category D like cooking oil**
   - **Location:**
   - **Purpose:** Storage until disposal to reception facilities.
   - **Capacity:**

5. **Storage location for garbage of the category E like incinerator ashes**
   - **Location:**
   - **Purpose:** Storage until disposal to reception facilities.
   - **Capacity:**

6. **Storage location for garbage of the category F like operational waste**
   - **Location:**
   - **Purpose:** Storage until disposal to reception facilities or until incineration.
   - **Capacity:**
7 Storage location for garbage of the category G like cargo residues
   • Location:
   • Purpose: Storage until disposal to reception facilities.
   • Capacity:

8 Storage location for garbage of the category H like animal carcasses
   • Location:
   • Purpose: Temporary storage until discharge into the sea.
   • Capacity:

9 Storage location for garbage of the category I like fishing gear
   • Location:
   • Purpose: Storage until disposal to reception facilities.
   • Capacity:

10 Storage location for recyclable garbage
    • Location:
    • Purpose: Storage until disposal to reception facilities.
    • Capacity:

11 Storage location for compost
    • Location:
    • Purpose: Storage until disposal for further processing ashore.
    • Capacity:

Date: Signature of the designated person:
Discharge of Garbage into the Sea
by type of garbage according to MARPOL 73/78, Annex V:

<table>
<thead>
<tr>
<th>Garbage Type</th>
<th>All Ships except Platforms</th>
<th>Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platform</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outside special areas</td>
<td>Within special areas</td>
</tr>
<tr>
<td></td>
<td>Regulation 4</td>
<td>Regulation 6</td>
</tr>
<tr>
<td></td>
<td>(Distances are from the nearest land)</td>
<td>(Distances are from nearest land or nearest ice-shelf)</td>
</tr>
<tr>
<td>Food waste comminuted or ground</td>
<td>≥ 3 nm, en route and as far as practicable</td>
<td>≥ 12 nm, en route and as far as practicable</td>
</tr>
<tr>
<td></td>
<td>Discharge permitted</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Food waste not comminuted or ground</td>
<td>≥ 12 nm, en route and as far as practicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues, not contained in washwater</td>
<td>≥ 12 nm, en route and as far as practicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues, contained in washwater</td>
<td>≥ 12 nm, en route and as far as practicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2)</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives contained in cargo hold washwater</td>
<td>Discharge permitted</td>
<td>≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2)</td>
</tr>
<tr>
<td>Cleaning agents and additives in deck and external surfaces washwater</td>
<td>Discharge permitted</td>
<td>Discharge permitted</td>
</tr>
<tr>
<td></td>
<td>Discharge prohibited</td>
<td></td>
</tr>
<tr>
<td>Animal Carcasses (should be split or otherwise treated to ensure the carcasses will sink immediately)</td>
<td>Must be en route and as far from the nearest land as possible. Should be &gt; 100 nm and maximum water depth</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td></td>
<td>Discharge prohibited</td>
<td></td>
</tr>
<tr>
<td>All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse</td>
<td>Discharge prohibited</td>
<td></td>
</tr>
</tbody>
</table>

Date: ________________
Name and signature of the master: ___________________________